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IN THE COURT OF APPEAL OF THE STATE OF CALIFORNIA

FIRST APPELLATE DISTRICT

DIVISION ONE

COMMUNITIES FOR A BETTER ENVIRONMENT, et al., Plaintiffs and Respondents, v. STATE WATER RESOURCES CONTROL BOARD, et al., Defendants; TESORO REFINING AND MARKETING COMPANY, Real Party in Interest and Appellant. .	A100327 (San Francisco County Super. Ct. No. 319575)

Appellant Tesoro Refining and Marketing Company operates the Golden Eagle Refinery (the Refinery) near Avon, California, on the shores of Suisun Bay. The Refinery operates under a National Pollutant Discharge Elimination System (NPDES) permit issued by the Regional Water Quality Control Board, San Francisco Bay Region (Regional Board). The permit regulates the Refinery's discharges of dioxins and other pollutants into Suisun Bay. In June 2000 the Regional Board amended the permit. After an administrative appeal, the State Water Resources Control Board (State Board) upheld the amended permit.

Respondents, Communities for a Better Environment and San Francisco BayKeeper, challenged the amended permit by a petition for writ of mandate in the superior court. Respondents argued, inter alia, that the amended permit failed to comply with applicable federal pollution control laws because it failed to set a numeric "water quality based effluent limit" (WQBEL) for dioxin discharges. The superior court agreed

and granted the petition. Tesoro appeals from the judgment granting the writ of mandate, and argues that the trial court erred by ruling a WQBEL had to be numeric. We reverse because a WQBEL does not have to be numeric in all cases, and under the circumstances of this case three administrative agencies properly approved the amended permit as a valid means of pollution control.

I. BACKGROUND

Before we review the merits, we must first discuss the legal, factual, and procedural background of this case.

A. Legal Background

We begin with a brief overview of the applicable law. To enhance understanding we use bold italics to introduce significant terms of art of pollution control.

In 1972, Congress enacted the Federal Water Pollution Control Act (33 U.S.C. § 1251 et seq.), commonly known as the Clean Water Act (CWA). (See *WaterKeepers Northern California v. State Water Resources Control Bd.* (2002) 102 Cal.App.4th 1448, 1452 (*WaterKeepers*).) The goal of the CWA is "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." (33 U.S.C. § 1251(a); see *Arkansas v. Oklahoma* (1992) 503 U.S. 91, 101 (*Arkansas*).)

Generally, the CWA "prohibits the discharge of any pollutant except in compliance with one of several statutory exceptions. [Citation.]" (*WaterKeepers, supra,* 102 Cal.App.4th at p. 1452.) The most important of those exceptions is pollution discharge under a valid NPDES permit, which can be issued either by the Environmental Protection Agency (EPA), or by an EPA-approved state permit program such as California's. (33 U.S.C. § 1342; *WaterKeepers, supra,* at p. 1452; see *Arkansas, supra,* 503 U.S. at pp. 101-103.) NPDES permits are valid for five years. (33 U.S.C. § 1342(b)(1)(B).)

Under the CWA's NPDES permit system, the states are required to develop ***water quality standards***. (33 U.S.C. § 1313(a); see *Arkansas, supra,* 503 U.S. at p. 101.) A water quality standard "establish[es] the desired condition of a waterway." (503 U.S. at p. 101.) A water quality standard for any given waterway, or "water body," has two

components: (1) the designated beneficial uses of the water body and (2) the ***water quality criteria*** sufficient to protect those uses. (33 U.S.C. § 1313(c)(2)(A); 40 C.F.R. § 131.3(i) (2002).)

Water quality criteria can be either ***narrative*** or ***numeric***. (40 C.F.R. § 131.3(b) (2002).) By way of example, in its decision below the State Board noted that "[a] typical narrative criterion . . . prohibits 'the discharge of toxic pollutants in toxic amounts.' " A numeric criterion establishes a quantitative limitation on pollutant concentrations or levels, to protect beneficial uses of the water body. (40 C.F.R. § 131.3(b) (2002).) The State Board noted "[a]n example of a numeric saltwater criterion for copper to protect aquatic life is 3.1 micrograms per liter (μg/l) as a monthly average."

Generally, to meet water quality standards a polluter must comply with ***effluent limitations***. The CWA defines an effluent limitation as "any restriction established by a State or the [EPA] Administrator on quantities, rates, and concentrations of chemical, physical, biological, and other constituents which are discharged from point sources into navigable waters, the waters of the contiguous zone, or the ocean, including schedules of compliance." (33 U.S.C. § 1362(11).)[1] "Effluent limitations are a means of *achieving* water quality standards." (*Trustees For Alaska v. E.P.A.* (9th Cir. 1984) 749 F.2d 549, 557, italics in original.)

NPDES permits establish effluent limitations for the polluter. (33 U.S.C. §§ 1311, 1312, 1342(a)(1); *EPA v. State Water Resources Control Board* (1976) 426 U.S. 200, 205 (*EPA*).) CWA's NPDES permit system provides for a two-step process for the establishing of effluent limitations. First, the polluter must comply with ***technology-based effluent limitations***, which are limitations based on the best available or practical

[1] A "point source" is defined as "any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged." (33 U.S.C. § 1362(14).)

technology for the reduction of water pollution. (33 U.S.C. § 1311(b)(1)(A); see *EPA, supra,* at pp. 204-205.)

Second, the polluter must also comply with more stringent ***water quality-based effluent limitations (WQBELs)*** where applicable. In the CWA, Congress "supplemented the 'technology-based' effluent limitations with 'water quality-based' limitations 'so that numerous point sources, despite individual compliance with effluent limitations, may be further regulated to prevent water quality from falling below acceptable levels.' " (*National Wildlife Fed. v. U.S. Army Corps* (D.Ore. 2000) 92 F.Supp.2d 1072, 1075, quoting *EPA, supra,* 503 U.S. at p. 205, fn. 12.)

The CWA makes WQBELs applicable to a given polluter whenever WQBELs are "necessary to meet water quality standards, treatment standards, or schedules of compliance, established pursuant to any State law or regulations . . . ." (33 U.S.C. § 1311(b)(1)(C); 40 C.F.R. § 122.44(d)(1) (2002).) Generally, NPDES permits must conform to state water quality laws insofar as the state laws impose more stringent pollution controls than the CWA. (33 U.S.C. § 1370; see Wat. Code, §§ 13263, subd. (a), 13372.) Simply put, WQBELs implement water quality standards.[2]

EPA regulations implement the two-pronged effluent limitation system for NPDES permits. The regulation pertinent to the issue on appeal is 40 Code of Federal Regulations section 122.44 (section 122.44).[3] Section 122.44(a)(1) requires technology-based effluent limitations. Section 122.44(d) governs WQBELs.

Section 122.44(d) (1)(i) requires WQBELs whenever the permitting agency determines that pollutants "are or may be discharged at a level which will cause, *or have the reasonable potential to cause*, *or contribute to* an excursion above any State water quality standard, [including narrative criteria for water quality]." (Italics added.)

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[2] In California, water quality standards are established through regional water quality control plans, known as basin plans, which are approved by the State Board. (See *WaterKeepers, supra,* 102 Cal.App.4th at pp. 1451-1452.)

[3] Henceforth, we will refer to this section as "section 122.44," and to any of its subdivisions or smaller components as, for example, "section 122.44(d)(1)(i)."

According to the State Board's decision, "The analysis to determine what pollutants must have [WQBELs] is commonly called the 'reasonable potential analysis.' "

Section 122.44(d)(1)(iii) provides that "When the permitting authority determines . . . that a discharge causes, has the reasonable potential to cause, or contributes to an in-stream excursion above the allowable ambient concentration of a State numeric criteria within a State water quality standard for an individual pollutant, the permit must contain effluent limits for that pollutant."

Section 122.44(d)(1)(vi) provides that "Where a State has not established a water quality criterion for a specific chemical pollutant that is present in an effluent at a concentration that causes, has the reasonable potential to cause, or contributes to an excursion above a narrative criterion within an applicable State water quality standard, the permitting authority must establish effluent limits using one or more of the following options:

"(A) Establish effluent limits using a calculated numeric water quality criterion for the pollutant which the permitting authority demonstrates will attain and maintain applicable narrative water quality criteria and will fully protect the designated use. Such a criterion may be derived using a proposed State criterion, or an explicit State policy or regulation interpreting its narrative water quality criterion, supplemented with other relevant information which may include: EPA's Water Quality Standards Handbook, October 1983, risk assessment data, exposure data, information about the pollutant from the Food and Drug Administration, and current EPA criteria documents; or

"(B) Establish effluent limits on a case-by-case basis, using EPA's water quality criteria, published under section 304(a) of the CWA, supplemented where necessary by other relevant information; or

"(C) [The parties agree that option C, the third and final option, is not pertinent to this case. We therefore omit it.]"

We note that the trial court granted the writ of mandate on the ground that the Refinery permit, as amended by the State Board, "does not contain a numeric WQBEL . . . in violation of [Section] 122.44(d)(1)(vi)(A)." Whether section 122.44(d)(1)(vi)(A)

requires a numeric WQBEL is the central issue to this appeal. As noted above, a water quality *standard* can be numeric; the question before us is whether a *WQBEL*, which implements a narrative or numeric water quality standard, *must itself* be numeric. Before we reach that issue we must conclude our discussion of this case's legal, factual, and procedural background.

Water quality standards do more than provide the basis for deriving effluent limits. The standards also are instrumental in identifying bodies of water which are impaired by the cumulative discharges of pollutants. The CWA requires the states to identify all bodies of water for which technologically-based effluent limitations are insufficient to maintain water quality standards. (33 U.S.C. § 1313(d)(1)(A); see 40 C.F.R. § 130.7 (2002).)

For all such identified water bodies, and for all appropriate pollutants discharged therein, the state must establish a ***total maximum daily load (TMDL)***, which defines the maximum amount of the pollutant which can be discharged—or "loaded"—into the body of water from all combined pollution sources. (40 C.F.R. § 130.2(i) (2002); see *Dioxin/Organochlorine Center v. Clarke* (9th Cir. 1995) 57 F.3d 1517, 1520.) A TMDL is "a written, quantitative plan and analysis for attaining and maintaining water quality standards in all seasons for a specific waterbody and pollutant." (40 C.F.R. § 130.2(h) (2002).)

A TMDL must be "established at a level necessary to implement the applicable water quality standards . . . ." (33 U.S.C. § 1313(d)(1)(C).) A TMDL assigns a ***waste load allocation (WLA)*** to each point source, which is that portion of the TMDL's total pollutant load, which is allocated to a point source for which a NPDES permit is required. (40 C.F.R. § 130.2(g) (2002).) Once a TMDL is developed, effluent limitations in NPDES permits must be consistent with the WLAs in the TMDL. (§ 122.44(d)(1)(vii)(B).) In fact, a WLA in a completed TMDL is a type of WQBEL. (40 C.F.R. § 130.2(h) (2002).)

B. Factual Background

The factual background of this case, both scientific and historical, is not in material dispute.

1. Scientific Background – Dioxins and Furans[4]

Dioxins (polychlorinated dibenzodioxins) and furans (polychlorinated dibenzofurans) are two classes of over 200 structurally similar compounds. Seventeen of these compounds are considered the most toxic, at least for the purposes of the water quality case now before us. The most toxic of the 17 is the dioxin known as "2,3,7,8-tetrachlorodibenzo-p-dioxin," aka "2,3,7,8-TCDD." The other 16 compounds are 6 dioxins and 10 furans, collectively considered "congeners" of 2,3,7,8-TCDD, meaning simply that they possess similar qualities or characteristics.[5] For the sake of simplicity, further references to "dioxins" in this opinion are to these 17 toxic dioxins and furans.

Dioxins are not produced intentionally. They are formed as undesired byproducts of combustion and the manufacture and use of certain chlorinated chemical compounds. They exist in the environment worldwide, particularly in air, water, soils, and sediments. They enter the atmosphere through aerial emissions and widely disperse through a number of processes, including erosion, runoff, and volatilization from land or water. For example, automobile exhaust is a common source of dioxins.

Dioxins are insoluble in water and very persistent in soil and sediments. They are absorbed into organic matter and bioaccumulate in human and animal tissue. They enter the food chain and thus bioaccumulate in human tissue from consumption of contaminated food, especially meat, fish, shellfish, and eggs.

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[4] We take the facts in this subsection primarily from the written decision of the State Board. We by no means intend to present a comprehensive scientific discussion of the nature of dioxins and furans and their effect on the environment. Such a discussion is neither within the expertise of this court nor necessary for our resolution of this case.

[5] A "congener" is defined generally as "[a] member of the same kind or class with another, or nearly allied to another in character." (Oxford English Dict. (2d ed. 1989) <*http://www.dictionary.oed.com.html*> (as of May 30, 2003).)

The EPA has targeted dioxins as dangerous and toxic substances since at least 1984. The State Board and the Regional Board have regulated dioxin discharges since at least the early 1990s.

2. Historical Background

As noted in the lead paragraph, Tesoro operates the Golden Eagle Refinery on the shores of Suisun Bay.[6] The Refinery processes an average of 150,000 barrels of crude oil a day, producing gasoline and diesel fuel. Treated wastewater from the Refinery production—an average of 4.7 million gallons per day—is discharged into Suisun Bay through an outfall pipe known as "Waste 001." Waste 001 lies at the end of a two-mile canal, known as the "Clean Canal," through which storm water from several other industrial facilities drains into the Bay. Thus, only a portion of the Bay discharge from Waste 001 comes from the Refinery—although that fact was not known at the outset, but only emerged over time.

Five of the 17 dioxins discussed above are consistently found in the Refinery's wastewater. The five do not include 2,3,7,8-TCDD.

The Refinery's discharges are governed by NPDES Permit No. CA0004961, first issued by the Regional Board in 1988. In 1993, the Regional Board reissued the permit, and imposed—apparently for the first time—a numeric WQBEL for dioxins. The 1993 permit included a WQBEL of 0.14 picograms per liter (pg/L) of "TCDD equivalents."[7] The phrase "TCDD equivalents" refers to the 17 toxic dioxins discussed above. The WQBEL of 0.14 pg/L was based on the State Board's 1992 amendments to the San Francisco Bay Basin Plan.

The 1993 permit included a compliance schedule consisting of six tasks the Refinery was charged to complete. These included continuing a pilot study of a method

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[6] Various changes in the ownership and name of the Refinery do not concern us here.

[7] A picogram is one million-millionth of a gram, or 1 x 10^{-12} gram. (See Oxford English Dict. (2d ed. 1989) definition of prefix "pico-," *<http://www.dictionary.oed.com.html>* (as of May 30, 2003).)

of pollution control, and submitting technical and progress reports. The Refinery was to comply fully with the effluent limit by June 30, 1995. It appears that when the 1993 permit was issued, the Regional Board assumed the Refinery was the sole, or at least the primary, source of dioxin discharge into Suisun Bay.

By October 1993, the Refinery had begun treating its wastewater with granulated activated carbon. This treatment was "successful at removing greater than 95% of the dioxins" from the Refinery's discharges.

On June 21, 1995, the Regional Board reaffirmed the Refinery's 1993 NPDES permit, by rejecting the Refinery's request for an amendment to the numeric WQBEL for dioxins. The Regional Board found that "the effluent limit specified" in the 1993 permit "is appropriate and necessary for the full protection of water quality for beneficial uses."

On November 15, 1995, the Regional Board issued a Cease and Desist Order (CDO) against the Refinery. In the CDO the Regional Board observed that—despite the removal of 95 percent of the dioxins from the wastewater by carbon treatment—the monitoring data since November 1993 "show no appreciable reduction of dioxins levels in the discharge from [the Refinery]. The data show that although treatment of the regeneration wash water was effective at the source, it had little if any impact on the final discharge."

The Regional Board then observed: "[The Refinery] has performed some preliminary studies to determine other potential sources of dioxins to Waste 001. Although not conclusive at this time because of the limited amount of data available, these preliminary studies indicate that [the Refinery's] treatment plant effluent may not be the major source of dioxins in the Waste 001 discharge. Other streams which combine with the treatment plant effluent in the 'Clean Canal' may be contributing greater quantities of dioxins. These streams include [the Refinery's] coke storage pond water, storm water runoff from non-process areas, storm water runoff from adjoining properties, and possibly even sediment in the 'Clean Canal.' Further investigation is necessary to verify any of these preliminary findings."

The Regional Board found that the Refinery "has put forth a reasonable amount of effort . . . to solve the dioxin problem by installing the treatment system for catalytic reformer wash water." But the fact of continued pollution remained, regardless of the uncertainty about its source. The Regional Board found that all seven compliance samples of the Waste 001 discharge into Suisun Bay contained dioxins above the effluent limit of the 1993 permit, i.e., 0.14 pg/L. "These data show that [the Refinery] has violated and is threatening to continue to violate the effluent limit for dioxin specified in" the 1993 and 1995 permits. Thus, "additional effort is necessary to reduce the discharge of dioxins so that beneficial uses of the receiving water are fully protected."

Accordingly, in the CDO the Regional Board ordered the Refinery to immediately comply with an interim effluent limit of 0.14 pg/L for 2,3,7,8-TCDD, the most toxic dioxin, and to conduct a comprehensive study of measures to enable the Refinery to comply with a final effluent limit of 0.14 pg/L for all 17 dioxins. Such "final compliance" with the effluent limit for all dioxins was required by July 1, 1999.

On June 16, 1999, the Regional Board issued an order extending the deadline for final compliance to July 1, 2000. In its six-page order, the Regional Board found the Refinery "has been in compliance with the interim" effluent limit for 2,3,7,8-TCDD. The Regional Board further found that the Refinery was still out of compliance with the effluent limits for the other 16 dioxins, as set forth in the 1993 and 1995 permits, but through its pollution control efforts the Refinery had substantially reduced discharge concentrations of those dioxins.

The Regional Board also noted that a Refinery investigation had shown that the refinery was not the primary source of dioxins in Suisun Bay. Rather, the dioxins entered the water by "atmospheric deposition," from sources such as motor vehicle exhaust and wood burning. The Refinery's wastewater thus became a "conveyance[] of dioxins . . . from other sources."

The Regional Board granted the extension of the final compliance deadline because changes in the statewide water quality standards and policies regarding dioxins

were forthcoming, and the Regional Board believed that any action to revise the terms of the CDO should await the new standards.

In May of 1999 the EPA formally declared Suisun Bay an impaired water body for several pollutants, including dioxins. In November 1999 the EPA wrote the Regional Board regarding the Refinery's permit, and stated the WQBEL for dioxins should be zero "unless a TMDL is completed which concludes that an alternative load can be assimilated by the receiving water." The EPA proposed that the Refinery's permit contain "[a] final limit . . . that compliance with the final WQBEL will be required within ___ years (not to exceed the time allowed in the Basin Plan). This limit will either be the WLA determined from an approved TMDL, or zero." The EPA also suggested that the Refinery be subject to numerous provisions, including a ban on increasing the mass of dioxins in the Bay and the implementation of an aggressive source control program.

The EPA reviewed the Regional Board's proposed changes to the permit. By a letter dated February 1, 2000, the EPA commented favorably on the proposed changes. The EPA specifically agreed with the Regional Board's proposal to complete a TMDL to derive a final WQBEL for dioxins. The EPA also agreed that the proposed permit incorporated EPA's suggested scheme of final limits of either a WLA from a completed TMDL, or zero—and that these proposed final limits "meet the [WQBEL] requirements of . . . [section] 122.44(d)."

On February 16, 2000, the Regional Board implemented the proposed changes by reissuing the Refinery's NPDES permit. The 2000 permit concluded that the Refinery's dioxin discharges have a reasonable potential of exceeding water quality standards. The 2000 permit retained the 0.14 pg/L WQBEL for all 17 dioxins. The Regional Board noted in the permit that the Refinery continued to reduce substantially dioxin concentration, and that the Refinery was not the primary source of the dioxins.

The WQBEL of 0.14 pg/L was retained as an interim limitation, imposed pending the completion of a TMDL. In light of the 1999 EPA finding that Suisun Bay was impaired for dioxins, the Regional Board included in the 2000 permit a statement of its intent to adopt a TMDL for dioxins by 2010. The TMDL for dioxins would include a

WLA for the Refinery. "The final effluent limitations for [the Refinery's dioxin] discharge will be based on [the] WLA[] . . . derived from the TMDL[]." The Regional Board determined to maintain the effluent limitations from the 1995 permit until such time as the TMDL was completed—at that point the Regional Board "[would] adopt a WQBEL consistent with the corresponding WLA."

The adoption of the TMDL involved the EPA and was expected to take up to 13 years from the May 1999 EPA finding.

On June 21, 2000, the Regional Board amended the 2000 permit. In what we shall refer to as "the 2000 amendment," the Regional Board rescinded the numeric WQBEL of 0.14 pg/L because it was "not appropriate" for the Refinery. The Board gave two reasons for this action. First, the May 1999 EPA finding required a "region wide cross media assessment of the [dioxin] problem . . . [which] should result in a more balanced, and more effective limitation" for the Refinery.

Second, "[the Refinery] has reduced the dioxins . . . in its discharge by 85 percent since CDO adoption. Despite this [the Refinery] cannot comply with [the numeric WQBEL]. The root cause of the violations are not within [the Refinery's] control, and the next step of treatment will be overly burdensome and not cost effective relative to the benefits. [The Refinery] provided data in 1997 that supports [its] contention that the violations are caused by ambient air deposition of dioxins . . . . Much of this is beyond [the Refinery's] control . . . . [The Refinery] has estimated that $10 [m]illion may be necessary to implement the next step of reduction. [The Refinery's] mass contribution is minor compared to other storm water inputs into the Bay."

The Regional Board replaced the numeric WQBEL with an interim effluent limitation of 0.65 pg/L. This was not a WQBEL—the new interim effluent limitation was not water quality-based, but performance-based. That is, the new interim effluent limitation was based on facility performance, viz., the actual concentrations of dioxins in the Refinery's discharge. The limitation applied to five of the 17 dioxins actually found in the discharge. But the 2000 amendment requires the Refinery to monitor for all 17 dioxins. The limitation was calculated from effluent samples collected from August 1996

to January 2000. The limitation was based on the mean plus three standard deviations. It represents the 99.87 percentile of the August 1996 to January 2000 data.

The Regional Board intended the 0.65 pg/L interim effluent limitation to apply until the EPA prepared a TMDL for dioxins in Suisun Bay, at which point the final WQBEL for dioxins would be established as a WLA in the TMDL. The Regional Board estimated that the EPA would complete the TMDL by 2012. If one were not complete at that time, the WQBEL for dioxins would be "no net loading," or zero. These two alternative WQBELs, the WLA or zero, are entirely consistent with the EPA's position in its letters of November 1999 and February 2000.

The 2000 amendment also included provisions for compliance monitoring. In fact, the amended 2000 permit contained a 12-year schedule of compliance imposing detailed responsibilities on the Refinery. These requirements include preparation of a Pollution Prevention Plan addressing dioxins, accelerated monitoring in the event that additional dioxins are discovered in the effluent, and participation in the San Francisco Bay Regional Monitoring Program which gathers data in support of the development of the TMDL.[8]

[8] For instance, the 2000 amendment provides: "In the interim, until final WQBELs are adopted, state and federal antibacksliding and antidegradation policies require that the Board retains effluent concentration limits from the Previous Order [the 1995 permit] to ensure that the waterbody will not be further degraded. In addition to interim concentration limits, interim performance-based mass limits are required to limit the discharge of [EPA-identified]-pollutants to their current levels. These interim mass limits are based on recent discharge data. . . . Where pollutants have existing high detection limits [such as dioxins], interim mass limits are not required because meaningful performance-based limits cannot be calculated for those pollutants with non-detectable concentrations. However, [the Refinery is] required to investigate alternative analytical procedures that result in lower detection limits. . . . [The Refinery] will also be required to conduct a study to investigate the feasibility and reliability of increasing sample size to reduce the detection limits for [dioxins]."

C. Procedural Background

Respondents appealed to the State Board from the Regional Board's orders reissuing and amending the 2000 permit. After an evidentiary hearing the State Board issued a lengthy decision largely upholding the orders of the Regional Board.

The State Board described the issuance of the 2000 permit as ***interim permitting***, a process whereby five-year NPDES permits are issued in the interim pending the preparation of a TMDL—which frequently takes much longer than the lifetime of the permit.

The State Board noted that interim permitting "can be problematic because if a water body is impaired, the water may not be able to assimilate more of the impairing pollutant. If this is the case, effluent limitations for the pollutant may be based solely on the applicable criterion or objective with no allowance for dilution. Hence, they may be extremely stringent. Ultimately, when the TMDL is done, the stringent limitations may become unnecessary because nonpoint source controls may provide assimilative capacity for the point source discharges[.] This may be especially true in cases where [as here] nonpoint pollutant sources are the primary contributors and point sources [such as the Refinery] are insignificant."

After considering the evidence, including expert testimony, the State Board concluded the Regional Board acted properly by imposing the performance-based effluent limitation and the schedule of compliance. The State Board noted that dioxins posed a problem that had to be solved on a regional level by creation of a TMDL. In the interim, the Refinery could comply with an effluent level consistent with its actual performance. The State Board pointed out the Refinery was not a significant source of dioxins: "evidence in the record indicates that the dioxins . . . in [Waste 001] are due primarily to stormwater runoff." And the Refinery had instituted measures resulting in an 85 percent reduction of dioxins discharged from the Clean Canal.

The State Board agreed with the Regional Board's determination that dioxins from the Refinery's discharge—even though the dioxins entered the discharge waters from other sources—created a reasonable potential for causing or contributing to the exceeding

of water quality standards. Thus, under section 122.44(d), a WQBEL was required in the NPDES permit. The State Board concluded: "The Regional Board complied with the [CWA] because it did include water quality-based effluent limitations for all 17 dioxin[s] . . . in the permit findings. These limits will be based on a TMDL or on no net loading." The State Board concluded the Regional Board properly imposed the performance-based interim effluent limitation under the circumstances of this case. The State Board also determined that the interim limit of 0.65 pg/L did not allow the Refinery to *increase* its discharges of dioxins.

The State Board reduced the 12-year schedule of compliance to 10 years, to comply with the 1995 Basin Plan. In all other respects pertinent to this opinion, the State Board upheld the Regional Board.

Respondents challenged the State Board's determination with a petition for writ of mandate filed in superior court. Respondents raised three issues: (1) that the amended 2000 permit violated the CWA and section 122.44(d) by failing to establish a WQBEL for dioxins; (2) that the permit violated the antibacksliding provisions of the CWA; and (3) that the permit schedule of compliance was invalid because no WQBEL had been established.

The superior court granted mandamus relief on issue (1), ruling that the amended 2000 permit "does not contain a numeric WQBEL," and thus violates section 122.44(d)(1)(vi)(A).

Specifically, the court ruled as follows: [¶] (a) that the parties did not dispute the Refinery's permit must contain a WQBEL for dioxins; [¶] (b) that the interim effluent limitation of 0.65 pg/L was not a WQBEL because it was performance-based, not water quality-based; and [¶] (c) that "[t]he final limits established in [the amended 2000 permit] do not constitute WQBELs because they are not numeric limits as required by [section] 122.44(d)(1)(vi)(A). The primary final limit, the TMDL-based limit, is not a WQBEL within the meaning of [s]ection 122.44(d)[(1)](vi)(A) because no TMDL has yet been established by [the] EPA or the State, and it therefore does not constitute a numeric limit. The alternate final limit, the limit of 'no net loading,' is not a WQBEL within the

meaning of [s]ection 122.44(d)[(1)](vi)(A) because the State has not yet developed a program that establishes a numeric limit."

The superior court did not reach issues (2) and (3) of the petition.

II. DISCUSSION

Tesoro makes numerous arguments on appeal, but first argues the trial court erred by determining that a WQBEL in the amended 2000 permit had to be numeric. Respondents counter by essentially arguing that the amended permit contained no WQBEL at all, numeric or otherwise, because the permit did not "establish" a current effluent limitation but deferred to the future process of TMDL development. We conclude that a WQBEL does not always have to be numeric, and that under the circumstances of this case the Regional Board did include valid WQBELs in the permit.

We first note our standard of review must extend appropriate deference to the administrative agencies in this case, and their technical expertise. (See, e.g., *Industrial Welfare Com. v. Superior Court* (1980) 27 Cal.3d 690, 702; *WaterKeepers, supra,* 102 Cal.App.4th at pp. 1457-1458.) And while interpretation of a statute or regulation is ultimately a question of law, we must also defer to an administrative agency's interpretation of a statute or regulation involving its area of expertise, unless the interpretation flies in the face of the clear language and purpose of the interpreted provision. (See *Family Planning Associates Medical Group, Inc. v. Belshé* (1998) 62 Cal.App.4th 999, 1004.)

We conclude that section 122.44(d) does not require a numeric WQBEL under the circumstances of this case. In the pertinent text of section 122.44(d), the word "numeric" never modifies "effluent limitation," only "water quality criterion." The reference to "numeric water quality criterion" is in section 122.44(d)(1)(vi)(A)—the very provision the trial court here found required a numeric WQBEL. But the EPA has made it clear that the function of section 122.44(d)(1)(vi) is to allow a permitting authority to derive a *numeric* water quality criterion when the state has only a *narrative* criterion. (*National Pollutant Discharge Elimination System; Surface Water Toxics Control Program*, 54 Fed.Reg. 23868, 23875 (June 2, 1989).) Section 122.44(d)(1)(vi) "requires NPDES

permit writers to use one of three mechanisms to translate relevant narrative criteria into *chemical-specific* effluent limitations." (*American Paper Institute, Inc. v. U.S. E.P.A.* (D.C. Cir. 1993) 996 F.2d 346, 350.)

It thus appears that in the application of the modifier "numeric," the trial court confused effluent limitations (i.e., WQBELs) with water quality criteria. We see nothing in the regulation which mandates numeric WQBELs in all circumstances. The definition of "effluent limitation" in the CWA refers to "any restriction," does not specify that a limitation must be numeric, and provides that an effluent limitation may be a schedule of compliance. (33 U.S.C. § 1362(11).) Moreover, section 122.44(k)(3) permits non-numeric WQBELs where numeric ones are not feasible.[9]

Case law is limited. A few cases seem to assume that a WQBEL is always a number, but the cases do not squarely address and decide the issue. (See *Am. Iron & Steel Inst. v. E.P.A.* (3rd Cir. 1976) 543 F.2d 521, 528; *American Iron And Steel Institute v. E.P.A.* (3rd Cir. 1975) 526 F.2d 1027, 1045.) But *Natural Resources Defense Council, Inc. v. Costle* (D.C. Cir. 1977) 568 F.2d 1369 (*Costle*), suggests that Congress did not intend numeric effluent limitations to be the only limitation on pollution discharges under the CWA, but intended a flexible approach including alternative effluent control strategies. (*Costle, supra,* 568 F.2d at p. 1380 & fn. 21.)

We find instructive a prior decision of the State Board, of which we have taken judicial notice: *In the Matter of the Petition of Citizens for a Better Environment, Save San Francisco Bay Association, and Santa Clara Valley Audubon Society* (Order No. WQ 91-03, May 16, 1991) 1991 WL 135460 (Cal.St.Wat.Res.Bd.). In that order, the State Board stated: "The petitioners contend that the Clean Water Act, and regulations and court decisions interpreting the Act, require the inclusion of numeric effluent limitations

[9] The regulation provides that so-called "best management practices" may control or abate pollution discharges when "[n]umeric effluent limitations are infeasible . . . ." This is not inconsistent with section 122.45(d)(1), which requires that effluent limitations for continuous discharges be stated as maximum daily and average monthly discharge limitations "unless impracticable."

in NPDES permits . . . . We have reviewed these authorities, and also opinions we have received from EPA, and conclude that numeric effluent limitations are not legally required. Further, we have determined that the program of prohibitions, source control measures and 'best management practices' set forth in the permit constitutes effluent limitations as required by law." (1991 WL 135460, p. 12.)

The State Board noted the EPA's regulatory definition of "effluent limitation" was broad, and noted that the *Costle* decision supported the conclusion that numeric limitations were not required—especially since CWA " 'gives EPA considerable flexibility in framing the permit to achieve a desired reduction in pollutant discharges. . . .' " (1991 WL 135460, p. 15, quoting *Costle, supra,* 568 F.2d at p. 1380.)

Specifically referring to section 122.44(d)(1), the State Board noted the regulation did not contain "the term 'numeric' effluent limitation. . . . Concededly, in most cases, the easiest and most effective chemical-specific limitation would be numeric. However, there is no legal requirement that effluent limitations be numeric." (1991 WL 135460, p. 19, fn. omitted.)

In the present case, the Regional and State Boards in essence concluded that a numeric WQBEL was not feasible (i.e., "not appropriate") for the reasons discussed above. In accordance with applicable regulations, Tesoro's NPDES permit did not have to contain a numeric WQBEL, and the trial court erred by granting mandamus relief on that ground.

We turn to respondents' contention that the permit contains no WQBELs at all, numeric or otherwise, because the Regional and State Boards deferred the determination of effluent limitations to the future completion of a TMDL, and did not establish current limitations. We note that this is not the typical case of a point-source polluter significantly contributing to toxic concentrations in a water body. It is undisputed the Refinery is not the primary source of the dioxins in Suisun Bay, but the dioxins in fact come from other sources, including the forces of nature, beyond the Refinery's control. The goal of which we should not lose sight is a bay environment free of harmful dioxins from all sources, attainable through a comprehensive TMDL.

A TMDL must include allocations to both point and nonpoint sources of listed pollutants, such as dioxin. The limitation may be a daily load limit or may be part of multiple TMDLs on the water body or one TMDL addressing numerous pollutants. The sum of the allocations must result in the water body attaining the applicable water quality standards.[10]

The Regional and State Boards concluded the problem of dioxins had to be addressed comprehensively at a regional level, by the completion of a TMDL. To be an effective TMDL the source analysis must identify the amount, timing, and each point of origin of the dioxins contaminating the Bay. The allocation element of a TMDL assesses responsibilities, identifies specific actions to be taken by identified parties, and results in an allocation of the total allowable pollutant burden. The sum of individual allocations should equal the total allowable pollutant burden.[11] Achievement of harm-free levels of dioxins involves not only oversight of the Refinery, but also other sources of origin. The TMDL will impose an effluent limitation that will protect the Bay from all sources, which will necessarily include any dioxins controllable by Tesoro.

In the interim the Refinery, through a schedule of compliance, was allowed to discharge only at current levels, which are not a significant source of the Suisun Bay dioxin problem. At the conclusion of the TMDL preparation period, during which the refinery must comply with a rigorous schedule of compliance, the refinery will have to either (1) comply with the dioxin WLA in the completed TMDL or (2) reduce dioxin discharge to zero. These two limitations, effluent limitations based on water quality standards, qualify as WQBELs in the 2000 amended permit. Title 33 United States Code section 1362(11) includes "schedules of compliance" within its definition of the term "effluent limitation." Section 1362(17) explains that a schedule of compliance "means a

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[10] See the U.S. Environmental Protection Agency Web site at <*http://www.epa.gov/owow/tmdl.html*> and the California State Water Resources Control Board Web site at <*http://www.swrcb.ca.gov/tmdl.html*> (as of May 30, 2003).

[11] See footnote 10.

schedule of remedial measures including an enforceable sequence of actions or operations leading to compliance with an effluent limitation, . . ." Title 40 Code of Federal Regulations section 130.0 (1985) explains that the process of water quality planning and management is jointly implemented by the EPA, the States, interstate agencies, and areawide, local, and regional planning organizations. "This process is a dynamic one, in which requirements and emphases vary over time." (40 C.F.R. § 130.0(e) (2001).)

Three separate administrative agencies, the Regional Board, the State Board, and the EPA, have approved this approach after considering compliance requirements. The approach is based on the State Board's interpretation of section 122.44(d)(1). Generally, we extend considerable deference to an administrative agency's interpretation of its own regulations or the regulatory scheme which the agency implements or enforces. The agency interpretation is entitled to great weight unless unauthorized or clearly erroneous. (See, e.g., *Californians for Political Reform Foundation v. Fair Political Practices Com.* (1998) 61 Cal.App.4th 472, 484; *Calderon v. Anderson* (1996) 45 Cal.App.4th 607, 613.) The factors governing the degree of judicial deference to agency interpretations are set forth in *Yamaha Corp. of America v. State Bd. of Equalization* (1998) 19 Cal.4th 1 (*Yamaha*). These factors include the court's assumption that the agency has the technical knowledge and expertise to interpret complex regulations in a technical or complex scheme. They also include the likelihood that agency officials have reached the interpretation after careful and studied review and input from the public. (See *Yamaha, supra,* at pp. 12-13.) Those factors are present in this case.

In light of the supporting record, and our reading of the applicable statutes and regulations, we agree with the agencies' determinations.[12] Respondents' arguments that the WQBELs are contingent and precatory simply ignore the reality of a carefully

[12] This is not a case like *WaterKeepers*, in which we did not defer to the agency because the regulation in that case was ambiguous and lacked a clear interpretive history. (*WaterKeepers*, *supra,* 102 Cal.App.4th at pp. 1457-1460.)

conceived, agency-approved, long-term pollution control procedure for a complex environmental setting.

In view of these dispositive conclusions, we find it unnecessary to discuss any additional arguments of the parties.

III. DISPOSITION

The judgment granting the petition for writ of mandate on the first issue of the petition is reversed. The cause is remanded to the superior court for determination of the second and third issues of the petition.[13] Each party shall bear its own costs of this appeal.

_____
Marchiano, P.J.

We concur:

_____
Swager, J.

_____
Margulies, J.

[13] We are not expressing any view about the two remaining issues. This opinion should not be seen as a harbinger of issues not yet decided.

COURT OF APPEAL, FIRST APPELLATE DISTRICT
350 MCALLISTER STREET
SAN FRANCISCO, CA 94102
DIVISION 1

COMMUNITIES FOR A BETTER ENVIRONMENT, et al.,
Plaintiffs and Respondents,
v.
CALIFORNIA STATE WATER RESOURCES CONTROL BOARD, et al.,
Defendants.
TESORO REFINING AND MARKETING COMPANY,
Real Party in Interest and Appellant.

A100327
San Francisco County Super. Ct. No. 319575

BY THE COURT:

The written opinion which was filed on May 30, 2003, has now been certified for publication pursuant to rule 976(b) of the California Rules of Court, and it is ordered published in the official reports.

Date: _____ _____
Marchiano, P.J.

Trial Court: San Francisco County Superior Court

Trial Judge: The Honorable James J. McBride

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Tesoro Refining & Marketing Co. v. Communities For A Better Environment and San Francisco BayKeeper, A100327